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ABSTRACT

The study reviews the impact of the freshman year and 4 years of undergraduate study on the formation of character and its progression from late adolescence to young adulthood. Much of the empirical data used is drawn from the Sierra Project, a study originating in the 1970s that addressed traditional obstacles in higher education in meeting its responsibility for character development through curriculum intervention and longitudinal research. The study's methodology and results are reported. Specific aspects of character development studied include changes in moral maturity, ego development, and principled thinking during the course of undergraduate study. The ways in which the context for promoting personal development can be changed are examined, and the elements of the Sierra Project curriculum considered central in this effort are outlined. Includes 35 references. (MSE)

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The Freshman Year

Character Development in the Freshman Year and over Four Years of Undergraduate Study

John M. Whiteley
Norma Yokota

HE 023 379

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Center for the Study of The Freshman Year Experience
University of South Carolina
1988

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J. M. Whiteley and N. Yokota, 1988 1

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FOREWORD

By
Nevitt Sanford

American universities have been expanding and becoming differentiated at a rate far beyond their capacity to achieve the integration which is necessary to any living system. Particularly in the years since World War II we have seen a fantastic proliferation of departments, specialties within departments, institutes, centers, and programs, each of which, in the major universities, has behaved as an independent principality, bent on its own aggrandizement, relating less to other substructures in the same institution than to outside constituents, markets, and sources of funds. This has been going on long enough so that this model of a university is widely regarded as just a phenomenon of nature, something that the good Lord intended.

Enormous interest is vested in these present structures. It seems that only a few of us old-timers remember the humane and humanizing universities of the 1920's and 1930's, some of which surely achieved greatness — and this without huge inputs of funds from Washington or elsewhere. Their greatness depended on a clear vision of goals and a willingness to organize effort in their pursuit.

In my more despairing moments it seems to me that the modern university has succeeded in separating almost everything that belongs together. Not only have fields of inquiry been subdivided until they have become almost meaningless, but research has been separated from teaching, teaching and research from action, and, worst of all, thought from humane feeling.

The effects of these changes on students, especially undergraduates, have been devastating. It is fair to say that in most of our universities — and in many of our elite liberal arts colleges - a majority of the students suffer from a lack of a sense of community, confusion about values, a lack of intimate friends, a very tenuous sense of self (including serious doubt about their personal worth), and the absence of a great cause, movement, service, religion, belief system, or anything else that they might see as larger than themselves and in which they could become deeply involved.

I conclude from this that those of us who care about the nation's youth and their education must now work to construct conditions and promote values that we once took for granted.

Much of value was taken for granted at the University of Richmond (a small college with a law school) when I was there in the 1920's. I am sure it never occurred to anyone to suggest that we ought to build community. Indeed, to have talked about community at that time and place would have been like talking to a fish about water. It was not only that students and faculty alike generally shared the same values but we all could upon occasion display our genuine school spirit. I belonged to a fraternity and to several athletic teams; and was best friends with a young man who shared my interest in academic work. I never doubted that these young men cared for me and over the years I have always known that when I went back to Richmond we would take up our friendships just where we left off. My older fraternity brothers and teammates took pains to instruct me how to act in various social situations. At the same time I was sometimes able to help some fellow athletes with their homework; they took pride in the fact that one of them could "understand this stuff." I was usually able to hold my own in the innumerable "bull sessions" we had.

I was never close to my professors, being too shy to take questions or problems to any of them. I can, however, call up vivid images of at least a dozen of these men. This, I think, is not so much because they were unusually individualistic, but because they expressed themselves more freely than do professors today. They were teachers above all else; they felt safe in saying what they pleased and, most important, we could "get them off the subject." We wanted to know what they really felt and thought about issues and people, not just about Shakespeare or Bismarck but about H. L. Mencken, the Scopes trial, and the Soviet Union; in sum, about what interested us. Thus, they exposed themselves as whole persons and bearers of value.

One value that was universally espoused was that of liberal education. In "bull sessions" we debated whether the purpose of education was to learn "how to live" or "how to make a living" and came down overwhelmingly on the side of the former. Even those students who were bound for medicine, law, or the ministry thought the way to get started was to "get a liberal education."

Most of us gave little thought to what we would do after college. All we were clear about was that we would stay as close as possible to the city of Richmond and maintain close ties with family and friends. They would find jobs for us, and if we got into trouble they would take care of us. We were under no pressure to establish our "vocational identities." The selves we felt ourselves to be depended instead on such factors as family, locale, region, religion, ethnicity, school, and group memberships; also on interest, activities, and personal characteristics that were confirmed by others. The confirming — or disconfirming — of notions we had about

ourselves was fairly easy in an environment where friends and relations cared enough to "straighten each other out."

I, in company with many of my fellows, I believe, had a hard time finding out what I could and could not do, suffering more than a few painful blows to self-esteem in the process; but I never doubted that in some fundamental way I was, or would be, all right. This was not only because I knew I was loved by family and friends but because our professors somehow conveyed the idea that, despite our obvious shortcomings, great things were expected of us; the reason they berated us so often was because they believed that, some day, affairs of great moment could be left safely in our hands.

In sum, we had *community,* every opportunity for intimacy, values that were clearly defined and exemplified by professors, ways of defining ourselves that did not depend on achievement or vocational aspiration, and plenty of ways to satisfy our need for "homonomy." This last is Andras Angyal's term. He wrote that every individual needs not only autonomy but homonomy, "to become an organic part of something he conceives as greater than himself — to be in harmony with super individual units, the social world, nature, God, ethical world order, or whatever the individual's formulation of it may be" (Angyal, 1941, p. 172). There were plenty of things around that people could throw themselves into: the Christian religion, the Baptist Church, Southern culture, the Democratic party, Sigma Phi Epsilon, football — to mention a few.

Richmond was not unique. In fact, it was very much like other small colleges of the time — not only in the South but nationwide. More than that, much of the culture and spirit I have tried to describe prevailed in the universities. To get along at Harvard, where I became a graduate student in 1930, all one had to do was to have some intellectual interests, to respect those of others, and to be civil in argument. The faculty displayed these values; they showed their concern for students and convinced us that they could be trusted. We students, knowing that we were in a system that really worked, felt no need to compete with each other. Instead, mutual help and cooperation were the order of the day and many enduring friendships were formed.

The University of California at Berkeley, in the early 1940's, was even more a community than Harvard, even though there were 20,000 students around. It *felt* like a community. When Provost Monroe Deutsch spoke on formal occasions everybody felt that he spoke for us all. Professors in one department fraternized easily with professors in various others. Graduate students were happy and secure, for they knew that as long as they were serious and willing to work some professor would see them through to their degree. Assistant professors, such

as I, were also secure, for we knew that having been brought into a departmental family we would be looked after and promoted in our turn. The psychology department at Berkeley was already famous in the 1930's; yet it was not until 1947 that any assistant professor ever hired by that department was out instead of up.

When I went to work at Vassar College in 1952 I soon felt very much at home. The place was a lot like Richmond. Of course, the academic standards were higher, everybody was more serious about what they were doing, and there was greater liberalism in politics, but there was much of the sort of community I had grown used to. There was universal belief in liberal education and a generally agreed upon set of values, organized around something vaguely defined as "quality." This embodied some intellectual snobbery, but there was much more to it than that. The faculty cared about students and worked hard at their teaching. Although there was some social stratification in the student body there was much sisterliness and open display of loyalty to the school. It was generally agreed that Vassar was a place where "you made your life-long friends."

But Vassar, like almost all other colleges and universities in the country, was to change. Shortly after World War II the federal government began pouring money into the universities to support research and graduate training. Soon the universities were putting more and more emphasis on research, less and less on teaching undergraduates. For example in the late 1940's my colleagues and I in the psychology department at Berkeley set out to make ours the strongest department in the university and the strongest psychology department in the nation. We competed fiercely with other departments around the country in our effort to get the best young researchers. We did not ask if they could teach; to sweeten our offers, we made the proposed teaching load as light as possible and promised our new recruits that they could teach their specialties. The curriculum proliferated wildly. At one time, unbeknownst to anybody in the department, the same text was being used in five courses, each with a different name. When our most senior professor retired there was no one around to worry about the integration of our curriculum. All that mattered was research and publication, and the training of graduate students in various specialties. In these circumstances nobody had time for undergraduates. They would have been dismissed altogether, I believe, were it not for the fact that the budget for psychology depended on how many undergraduate students we had.

What was happening in psychology, as I later learned, was happening in most other departments of the university, and what was happening at Berkeley was happening at universities all over the country. And after 1957, when Sputnik was launched, things took a turn for the worse. Now there was an increased accent on science and technology as a road to "national strength." The kind of science that soon got the upper hand was that modelled after

19th century physics. Understanding was to be achieved by the analysis of phenomena into finer and finer bits. Knowledge of how things fit together could wait. The required rate of publication could not be sustained if professors addressed themselves to large or complicated issues. The research that was to save us from the Russians became more and more trivial. In psychology, issues of great moment were turned into methodological problems.

In the humanities as well as in the sciences the Western techno-scientific approach to knowledge became increasingly dominant. In the excitement following Sputnik there was general acceptance of the notion that American education was mediocre. Professors now felt that they had permission to do, and to do more rigorously, what they wanted to do anyway, that is, concentrate on their scholarly specialties in their teaching as well as in their research. Professors of literature, for example, instead of focusing on the task of making great works available to undergraduates, insisted on close reading, detailed analysis, an interpretation according to their preferred conceptual schemes. In philosophy, professors who wanted to reduce their discipline to arguments about what philosophy is, or to the analysis of linguistic minutiae, took a new lease on life.

Where in the curriculum, then, were students to find anything to nurture the spirit? How were they to attain broad understanding, to find out what it means to be human, to experience wonder, to acquire a sense of values?

The liberal arts colleges, particularly the elitist ones, followed the example of the universities. The departments evaluated themselves primarily on the basis of how many of their students gained admission to good graduate schools. The safest course was to teach these undergraduates what the professors knew would be taught again in graduate school.

By 1964, as it turned out, the situation had become explosive. The student protests that began at Berkeley in September, 1964 were in the beginning protests against the "irrelevance" of the curriculum and the "impersonality" of campus life. Although the students' insistence on educational reform was soon forced into the background by protests against the Viet Nam War, it persisted and became a national movement. Great energy went into this movement, but it suffered from a lack of educational leadership. Many institutions just gave the students what they said they wanted, with small attention to what they needed. Nevertheless many constructive things were done. Whole new institutions were started within and without existing colleges and universities; for example, the experimental colleges within the University of California, Berkeley, and New College in San Francisco. Unfortunately this was almost always done with soft money and very few of the innovations have persisted.

Today the excitement of the sixties and early seventies seems remote. With the end of the Viet Nam War in sight the student movement ran out of steam, as movements do, and inevitably some reaction set in. Up until quite recently, and still, institutions have been busy putting back into place things that were "dislocated" in response to student activism. Neither students nor university officers are thinking about educational reform. They have other things on their minds. Students, for their part, having decided to work within the system, are very much taken up with getting into professional schools and will do whatever is required. Professors, with only pliable students to deal with, feel free to do what they like most and do best, that is, research and teaching their specialties — preferably to graduate students.

Concern with moral values seems to have disappeared from the scene. If the university has any noble purposes, or any purposes beyond preparing students for vocations, keeping the wheels turning, and maintaining the standard of living, there does not seem to be anyone around to say what these purposes are. Even with the emphasis on ethics that followed Watergate, instruction in this area has been focused almost exclusively on how to analyze ethical issues, critique ethical positions, and avoid "moral indoctrination" (Bennett, 1980). Nobody is telling students that they ought to do better or be better persons, or suggesting what *is* better; nor do students have much opportunity to learn from the example of their elders. On every university campus there are, to be sure, professors who have the self-discipline that it takes to discover and to tell the truth. But there are more who present examples of competitiveness and acquisitiveness, absorption in narrow specialties, virtuosity untempered by humane feeling. For better or worse, however, students rarely get to know their professors well enough to consider them as models. "Getting them off the subject" went out of fashion some time ago.

What is even more to be regretted, professors do not know their undergraduate students. Last year I had a letter from a former Stanford student who was in prison for murder. He is a Viet Nam veteran who had become mentally disturbed and deeply involved with drugs. The prosecutor had tagged him a sociopath, and he needed the testimony of someone who knew him when he was a student. He had taken a lecture course from me and, for one quarter in 1963, a course in guided reading and research. We met six or eight times and he submitted a paper. He told enough in his letter about what he had said and what I had said so that, remarkably enough, I remembered him. I believe I was able to be of some help to him. But (and this is the point of the story) I was the only professional person at Stanford who had known him personally and who, as he thought, might conceivably remember him. And he was there for four years. A university can be a very cold place; I have no doubt that it is as cold today as it was in 1963.

One might think that students who are alienated from their professors — and probably from most other adults — would turn to one another for intimacy and support. But not so. Colleagues and graduate students at the Wright Institute, who have been studying student life at Berkeley, tell me that these young people do not know how to make friends or behave on dates — that there is a distressing amount of loneliness on campus. I had observed the same phenomena at Stanford in the early 1960's. Apparently there is so much competition for grades and status, so much uncertainty about who one is and what one can do, that students cannot expose themselves enough to make intimate relationships possible. Most of them, most of the time, are putting on some kind of act.

Equally distressing is the fact that they cannot talk over such problems among themselves. My Wright Institute informants interviewed, in considerable depth, 15 young men who lived in a nearby fraternity house. The plan was to use the major themes that came up in the interview as a basis for group discussion. As expected, the fraternity men enjoyed the interviews; they were open, sincere, willing to talk about serious problems. But when the three interviewers arrived at the fraternity house to hold the discussion the music was turned on, the beer had been distributed, and young women soon arrived. Of course there was no discussion. It was as if each individual personality had been dissolved in the group.

Many students have told me that they and their acquaintances could not organize discussions of serious questions. Not only were they too wary of one another, but there was the ubiquitous TV and record player. This is in contrast not only with the "good old days" but with the recent past when students were involved in efforts at educational or political change. There was plenty of communication among them then, and some of it was the sort that calls for self-revelation and leads to intimacy. What they had primarily was homonomy. And this raises the question of what is there today that students can lose themselves in. For many, no doubt, preparation for their chosen vocation is enough to capture their imaginations and use up their energies. Beyond that the scene appears bleak. There seems to be very little action on the political left. The women's movement, demonstrations against nuclear weapons or in favor of environmental protection are still out there, but much of the life seems to have been drained from them. Clearly we need some new movements and, this time around, something that adults as well as students can throw themselves into. The fact that they long for homonomy is, I believe, one reason why students join cults or new religious groups.

In thinking of the pre-World War II university as a source of ideas about how we might improve the quality of campus life, and better assist students in their self-development, we must remember that the culture which prevailed then had its dark side. At Richmond there was universal and completely thoughtless racism. There were no Black students there, or at any

college I knew of. Blacks were so submerged that we never saw them except in menial roles; and this state of affairs was regarded as natural. Certainly it was never discussed. I was more aware of anti-Catholicism, and may have participated in it; but the ethnocentrism that I experienced most vividly and expressed with the most enthusiasm was in connection with a traditional football rivalry. On our campus it was generally believed that William and Mary College imported "ringers," (i.e., professional athletes, with strange ethnic backgrounds) who came from places like Jersey City, New Jersey. When we went into a game with this outfit it was virtually "holy war." Some months after graduating from college I was approached on the New York subway by a smiling young man who happily identified himself as someone who had played against me in the last Richmond-William and Mary game. I was struck dumb. Did he not realize that we were enemies, and that I would not be ready to make peace? He must have thought me a fool.

I might say in my own defense that people matured more slowly in those days than they do now, that it is probably better to display one's ethnocentrism on the playing fields than to do so in the streets. More than that, I was still an adolescent when I graduated from college, and adolescents are entitled to some measure of ethnocentrism. Their big problem is what to do about the emotional impulses they regard as low, destructive, and dangerous. The conventional strategy for adolescents, and for people stuck at that stage of development, is to cling to a group or to groups that are seen as good like themselves and to see the "bad" as existing in other people, who are then put beyond the pale.

Can we, then, have community without ethnocentrism? I believe that we can. We may hope that, as they grow older, adolescents will come to see that their impulses need not be projected onto other people or stamped out completely: that they may, instead, be modified or controlled. This kind of development can be brought about through education at the college level. It is partly a matter of learning to think well, and partly a matter of character development. What we desire for our college graduates is a capacity for group loyalty *and* tolerance of other groups, identity *and* intimacy, homonomy *and* autonomy. This requires that their personalities become sufficiently expanded, differentiated, and integrated so that opposite tendencies can be held in consciousness long enough for synergistic resolutions to be found.

I have argued for more than a few years (Sanford, 1956, 1962a, 1962b, and 1980) that the development of such personalities is the overarching aim of education and that all the resources of our educational institutions should be put in its service. As various theorists have insisted, personality functions as a unit; its diverse features develop an interaction one with the other (Allport, 1937; Murray, 1938; Angyal, 1941). Intelligence, feeling, emotion, and action can be separated conceptually but no one of them functions independently of the others. I wrote in

1962: "Just as nothing is truly learned until it has been integrated with the purposes of the individual, so no facts and principles that have been learned can serve any worthy human purpose unless they are restrained and guided by character. Intellect without humane feeling can be monstrous, while feeling without intelligence is childish; intelligence and feeling are at their highest and in the best relation one to another where there is a taste for art and beauty as well as an appreciation of logic and knowledge" (Sanford, 1962b).

I believe the authors of the present volume will agree with this statement, for their work is in the same spirit. Although they focus on character, it is clear that in creating a new educational environment — which they did as part of their Sierra Project — they have been guided by a conception of, and concern with, the whole person.

That environment, which is fully described here, deserves our best attention and careful study. It embodies in some degree all those things whose lack I have bemoaned in the above paragraphs. (In going on so long about the poor quality of student life generally, and about what we know, on the basis of the past, might be possible, my object has been to provide a background against which the significance of The Sierra Project may be highlighted.)

In this residential learning program we find a concern about values, opportunities to serve the larger community, close relations among faculty, staff and students, intensive small group discussions, special curricular experiences designed on the basis of developmental theory — in general a humanitarian and therefore humanizing environment. And all of this at the University of California, Irvine, an institution that prides itself on how rapidly it is becoming a great research university.

There are other projects and programs around the country that are based in theory and directed to the development of the student as a person. For example, at the University of Nebraska-Lincoln and at Azusa Pacific College students are provided with mentors and keep records of their activities an achievements. I know of no program, however, that is as comprehensive and far-reaching in its implications as the one being considered here.

The question is: What are the effects of the living-learning program on the students' development — with special reference to character? Attempts to answer this question for freshmen who spent one year in the project are fully described in this book. Experimental evaluation with the use of tests and control groups was carried out with the rigor one would expect of U.C. Irvine. More to my liking, there was a great deal of interviewing and some case studies.

Finally, I should say that The Sierra Project is not only a set of actions whose effects are then evaluated; it is also pure research on character development. This volume contains a thorough review of the literature on this subject but reports only part of the research results that are or will be available. Later reports will deal with the lasting effects of being in the program for freshmen and with the question of which educational procedures or experiences had what kinds of effects on which students. I can hardly wait.

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CHARACTER DEVELOPMENT IN THE FRESHMAN YEAR AND OVER FOUR YEARS OF UNDERGRADUATE STUDY

John M. Whiteley and Norma Yokota

The development of values and ethics during the college years has a venerable tradition in America. From the statements of purpose of the earliest colleges founded in colonial times to the role assigned by society to the multiversities of the Twentieth Century, there has been an expectation that components of the experiences which students have during the college years would contribute to their personal as well as to their professional development.

From its origins in the 17th Century, colleges and universities have included in their mission the development of the capacity to think clearly about moral issues and to act accordingly. In the early 1800s ethics and values were part of the core curriculum of those liberal arts colleges with religious traditions (McBee, 1980). This emphasis on morals and ethics occurred in the context of a broader concern for fostering social development — what Rudolph (1962, p. 140) referred to as an "impressive arsenal of weapons for making men out of boys." During the formative years of U.S. higher education, "the academic curriculum and the entire campus environment clearly viewed the formation of student character as a central mission of the collegiate experience" (Nucci and Pascarella, in press).

This monograph will review the impact of the freshman year and four years of undergraduate study on a central dimension of personal development: the formation of character and its progression from late adolescence to young adulthood.

Historically there have been a number of obstacles in the way of higher education's meeting its responsibility for character development. These have included: (1) the lack of definition of higher education's role in meeting this responsibility; (2) the lack of attention by institutions of higher education to establishing effective character education programs; (3) the lack of agreement on what constitutes character, character development, and character education; (4) the absence of controlled studies of long-term psychological interventions designed to promote character; (5) the lack of knowledge concerning which experiences have the greatest impact on promoting individual growth in moral reasoning; and (6) the relative absence of longitudinal studies of character development in college students. Each of those obstacles contributed to the general problem of determining <u>how</u> to go about developing character through higher education programs. As John Dewey remarked in 1897,

"It is commonplace to say that this development of character is the ultimate end of all school work. The difficulty lies in the execution of this idea" (p.28)."

The Sierra Project and the Obstacles to Character Development

A significant portion of the empirical data reported in this chapter is a product of The Sierra Project, a curriculum intervention and longitudinal research study which had its origins at the University of California, Irvine in the early 1970s. The Sierra Project addressed each of the historical obstacles; the remainder of this section will report how this was done, and form the basis for much of this chapter.

The first obstacle, that the nation's colleges and universities have neglected to define their responsibility, was addressed by providing a six-part rationale. The Sierra Project presents a curriculum designed to develop in university students a greater capacity for ethical sensitivity and awareness, an increased regard for equity in human relationships, and the ability to translate this enhanced capacity and regard into a higher standard of fairness and concern for the common good in all realms of their lives. These accomplishments are viewed as ultimately self-rewarding. Their development constitutes a central rationale for The Sierra Project effort at character education. There is, however, a second rationale which is to be found in the benefit to society of citizenry whose lives are characterized by principled thinking and moral maturity. Such individuals will be more responsible citizens, leaders, participants, and parents. Society as a whole is therefore a beneficiary of character education for college students.

Personal growth and psychological maturity are closely related to many dimensions of accomplishment in adulthood. The Sierra Project's approach to character education emphasizes ego development and the achievement of a higher level of moral reasoning in order to produce general personal growth and psychological maturity in interpersonal relationships. Therefore, a third rationale for The Sierra Project is in the ultimate benefit to its participants throughout their adult lives in terms of greater potential for accomplishment.

The fourth rationale for The Sierra Project is the impact of moral and psychological education programs on the level of moral reasoning and ego development of junior high school, high school, and college students (Rest, 1979a; Mosher and Sprinthall, 1971; Mosher, 1979; Scharf, 1978; Erickson and Whiteley, 1980; Whiteley and Bertin, 1982). The evidence is conclusive that properly sequenced educational and psychological experiences raise the level of moral reasoning and ego development of adolescents and young adults. This research is

extraordinarily hopeful in its implications: For society, education can make a difference in the moral reasoning of the citizenry.

Inquiry into devising curricula for character education, however, is in its infancy. Research has just begun on the crucial problem of determining the optimal match between the developmental level of students and the sequencing of educational experiences. Nonetheless, the legacy of the past decade is one of documenting the extraordinary potential of our educational institutions for positively impacting the character of students.

The fifth rationale for The Sierra Project is the nature of the challenges addressed during the four years of undergraduate education. For perhaps the first time in their lives, college students are physically and psychologically autonomous from those who have previously been highly influential in their lives: parents and siblings, school-age chums, and high school teachers and friends. Since the vast majority of beginning college students reason in a highly conventional manner, their moral referants are those people immediately around them. It is to significant others and to the peer group that college students look for guidance in formulating their thinking about ethical issues. Homogeneity of influence predominated in high school. The typical college environment, however, contains the opportunity for exposure to, and intellectual confrontation with, diversity in beliefs, lifestyles, and personality types. This is especially the case where there is a coed, multicultural, and mixed socio-economic population, as in The Sierra Project.

A further reason why the college years forcefully impact moral reasoning is the challenge of the growth tasks of late adolescence and early adulthood: securing identity, seeking intimacy, choosing enduring values, and initiating career and educational explorations of crucial significance. Each of these tasks contains the seeds of significant moral dilemmas. Their satisfactory resolution involves thoughtful moral choices. The extraordinary opportunity provided by the college years for impacting moral reasoning, therefore, is a fifth rationale for character education in the university.

A sixth rationale for The Sierra Project is a declarative statement about a central purpose of higher education, and about what should be provided as an educational challenge to the men and women of all ages who spend a vitally important segment of their lives studying and learning in colleges and universities. An experience in higher education should provide an opportunity to reflect on the purposes of learning, on the uses to which acquired knowledge is put, and on the ethical dilemmas which confront citizens individually and as members of society collectively.

This is a viewpoint which considers an essential goal of a college education to be the cultivation of a capacity for reflection about, and analysis of, issues in society both of a personal and a political nature. While consistent with purposes of a college education as preparation for life and career, and as a time for personal development, this sixth rationale stresses the importance of achieving a capability for integrating these two aspects of experience during the college years. It is a statement that the opportunity to focus on the process of learning, to think carefully about questions of values and valuing, is vital to a well-rounded college student. All too often such an opportunity is insufficiently a part of the usual experience at college and university.

That distinguished philosopher of higher education and the American scene, Doonesbury, presented a very similar rationale in one of the commencement address vignettes which Gary Trudeau has written on various occasions. In addressing the assembled graduates, the commencement speaker commented with concern upon the students' "obsessive concern for the future," an approach which has been "the salient shaping influence of your attitudes during a very critical four years..." He then went on to state eloquently our sixth rationale: "It could have been more than that. This college offered you a sanctuary, a place to experience PROCESS, to FEEL the present as you moved through it, to EMBRACE both the joys and sorrows of moral and intellectual maturation! It needn't have been just another way-station..." (Trudeau, 1972).

In summary, there is a six-part rationale for promoting the character development of college students:

1. For individuals, it is ultimately self-rewarding to have a greater capacity for ethical sensitivity and regard for equity in human relations.

2. Society benefits from citizens whose lives are characterized by principled thinking and moral maturity.

3. For individuals, the development of increased psychological maturity leads to greater accomplishment in adulthood.

4. Research has shown that educational experiences can raise the level of moral reasoning.

5. Experiences during the college years provide many opportunities for impacting moral reasoning.

6. Higher education should provide students with an opportunity for reflection on knowledge, values, and moral choices.

The second obstacle, that colleges and universities have not devoted much time and effort to — actual character development activities — was approached by surveying relevant psychological literature identifying promising theoretical constructs on which to base an intervention (Whiteley and associates, 1982, pp. 39-69), and reviewing the literature that does exist on character development methodology and practice (Whiteley and associates, 1982, pp. 71-83).

The third obstacle, the lack of agreement on what constitutes character, character development, and character education, was addressed by reviewing the use of these terms historically and currently, defining them conceptually, and then defining them empirically by three proximate measures of character: moral maturity, principled thinking, and ego development. The definitions selected are as follows:

Character, as we have defined it conceptually, has two parts. The first part refers to an understanding of what is the right, fair, or good thing to do in a given circumstance. The second part refers to the ability to do those things (the courage to act in accordance with one's understanding of what is right, fair, and good). Thus, character constitutes understanding what is right and acting on what is right.

Character Development, as we have conceptually defined it, refers to the progression of an individual's capacity for understanding what is right or good in increasingly complex forms, and the willingness or courage to act on those conceptions. Our emphasis is on understanding the internal (intrapsychic) progression within a maturing individual through his/her interaction with others and the environment.

Character Education refers to the planned and unplanned experiences which promote the development of character in individuals. Within The Sierra Project, the planned portions of the character education intervention are the classroom experiences provided by the curriculum modules. The unplanned portions of this character education are student interactions with the rest of the educational institution, other institutions of society, family and — particularly — friends and peers.

Principled Thinking is a measure of moral reasoning which refers to the degree to which individuals use principled moral considerations in making moral decisions. Principled thinking is measured by the Defining Issues Test (DIT), a paper-and-pencil

test exploring level of moral reasoning developed by James Rest and associates (Rest, 1979a).

Moral Maturity is a measure of moral reasoning which refers to the responses which individuals give to issues raised by a series of moral problems. Moral maturity is measured by the Moral Judgment Interview (MJI), a structured individual interaction between tester and subject in which the subjects are encouraged to clarify the reasons for their particular responses (Colby, Gibbs, Kohlberg, Speicher-Dubin, and Candee, 1979).

Ego Development is a measure tapping broad dimensions of the interwoven relationship of impulse control, character, interpersonal relations, conscious preoccupations, and cognitive complexity. Ego development is measured by the Sentence Completion Test (SCT), a written measure yielding a placement of each subject at one of a series of impressionistic discrete stages of ego development (Loevinger, 1966, 1976; Loevinger and Wessler, 1970).

The fourth obstacle, the absence of controlled studies involving year-long interventions designed to promote character, was approached in two ways. The first approach was to design and implement an educational and psychological intervention extending throughout the freshman year. Participants, consisting of forty-four freshmen (22 men and 22 women whose ethnicity was fairly equally divided between Asians, Anglos, Blacks, and Hispanics), lived in Sierra Hall. They enrolled in a four-unit class (a normal load is 16 units) each of the three academic quarters. The curriculum for the year was divided into 10 modules:

Module 1. Survival Skills: What freshmen need to know that most seniors already do: how to organize their time, how to study effectively, and how to prepare for and take examinations.

Module 2. Community Building: Helping students work together to create an atmosphere of openness, trust, and group support in an environment characterized by conflict resolution through democratic decision making. This is not an entirely self-contained module; often the content of the class fell into another module, but the process was designed to enhance the building of community. This module includes student-planned classes.

Module 3. Conflict Resolution in Society: Includes participation in SIMSOC (Gam-

son, 1972a; 1972b; 1978a; 1978b), a commercially available simulation game in which students are given vaguely structured roles and allowed to form their own society. In the implementation of SIMSOC in Sierra Hall, emphasis is placed on survival issues, personal goals, problems of power and authority, and what type of society provides the most good for the most people. Principles of fairness and justice as well as conflict resolution skills are involved throughout the game.

Module 4. Empathy and Social Perspective-Taking: Basic listening and communication skills for the development of empathy — defined as the ability to understand the point of view of another — and of the ability to communicate that understanding.

Module 5. Socialization: What are people like now? How did they come to be that way? Values and life styles were examined as salient factors and pressures in the socialization process.

Module 6. Sex-Role Choices: How socialization by gender affects current values, behaviors, and interests.

Module 7. Race Roles: How race related to socialization. Examines stereotyping, racial values and attitudes, and cross-cultural relationships.

Module 8. Assertion Training: Enhances relationships by helping students learn to identify the personal rights involved in a conflict situation and to resolve that situation, assuring their own legitimate rights without violating those of others.

Module 9. Life and Career Planning: Students explore decision making. This module helps students in the decision-making process by exposing them to a variety of life and career options.

Module 10. Community Service: Provides the opportunity for students to work with people with real problems in a naturalistic setting, allowing them to apply the skills they have been learning in Sierra in a community setting. This module allows the students to have positive contact with agencies outside the university community while still receiving support from the campus (this module was optional and was in addition to regular class). (Adapted from Loxley and Whiteley, 1986, pp. 56-57).

The second approach to the fourth obstacle was to evaluate the character development of college freshmen using multiple sources of data with an experimental group (Sierra Hall residents) and two control groups. This approach involved studying college freshmen in the context of an intensive year-long residential program, focusing on their development of the three empirical dimensions of character: principled thinking, moral maturity, and ego development.

The fifth obstacle, the lack of knowledge concerning those collegiate experiences which best promote individual growth in moral reasoning, was approached by conducting a series of research investigations ranging from intensive interviewing during the freshman year (Resnikoff and Jennings, 1982) to collecting student retrospective reports (Burris, 1982; Lee and Whiteley, in press; Bertin, Ferrant, Whiteley, and Yokota, 1985).

The approach to the sixth and final obstacle, the absence of longitudinal studies concerning growth in college students on dimensions of character, was to establish and conduct such a longitudinal study. Freshmen were tested and interviewed at the start of their freshman year, at the end of their freshman year, and at the end of their sophomore, junior, and senior years.

The Growth of Character During the Freshman Year

A consideration of the growth of character during the freshman year may be made in the context of what is known about the growth of character in general. There has been extensive research on the character measures of moral reasoning: moral maturity and principled thinking. In the twenty years that extensive research has been possible methodologically on the correlates of development in moral reasoning, the strongest relationship has been years of formal education.

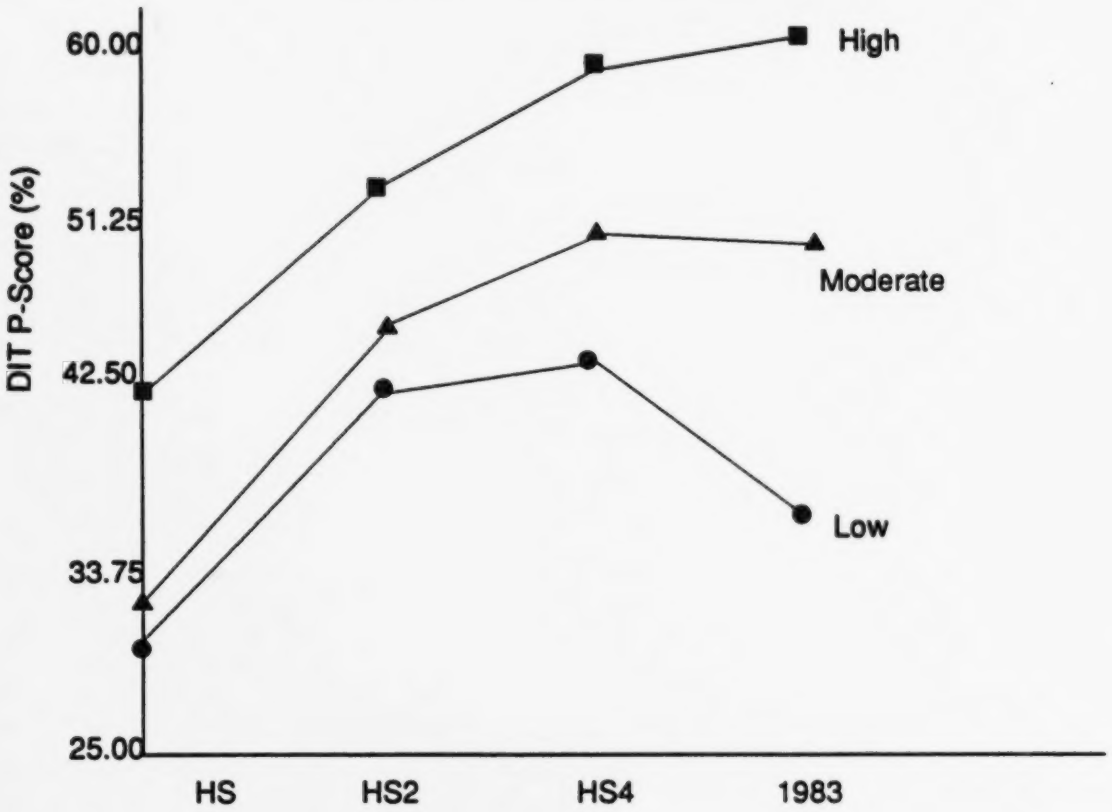
The two studies of this phenomena merit special attention, as they are the definitive research reports using the different instruments for assessing moral judgment. Lawrence Kohlberg and associates (Colby, Kohlberg, Gibbs, and Lieberman, 1983) reported on their longitudinal data with the Moral Judgment Inventory (MJI). They found correlates of moral judgment development with formal education to range between .53 and .60.

Rest and his associates with the Defining Issues Test (DIT) measure of moral judgment came to a similar conclusion with different data. In a 1979 study (Rest, 1979b), a secondary analysis of demographic correlates found that education was the strongest correlate. Rest and

Deemer (1986) extended this analysis and reported a ten-year longitudinal study of DIT scores over four testings (covering the period 1972 through 1983). They grouped educational accomplishment into three groupings: a high level of education since high school, a moderate level of education since high school, and those with a low amount of post-high school education.

Those subjects with a high level of post-high school education continued to increase over time. Those subjects in the middle classification increased some as a group, then leveled off. Those subjects in the lowest grouping of post-high school education increased in level of moral reasoning for the two years immediately following high school, then actually decreased.

TABLE 1
LONDITUDAL MEAN DIT BY EDUCATION

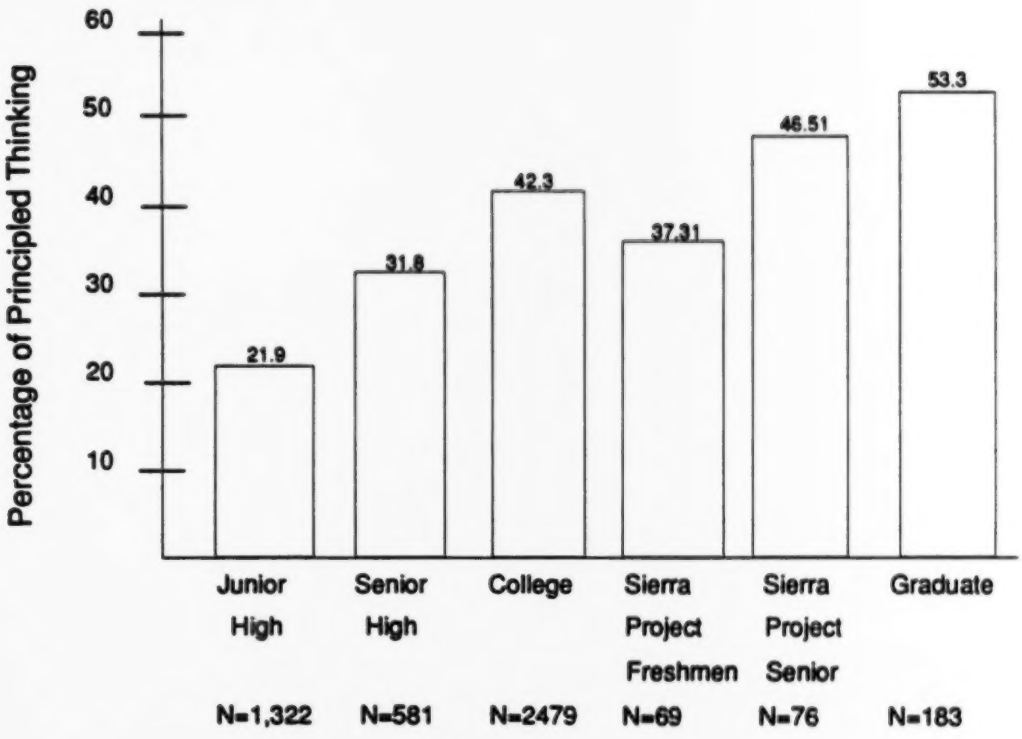


From Rest and Deemer, 1986

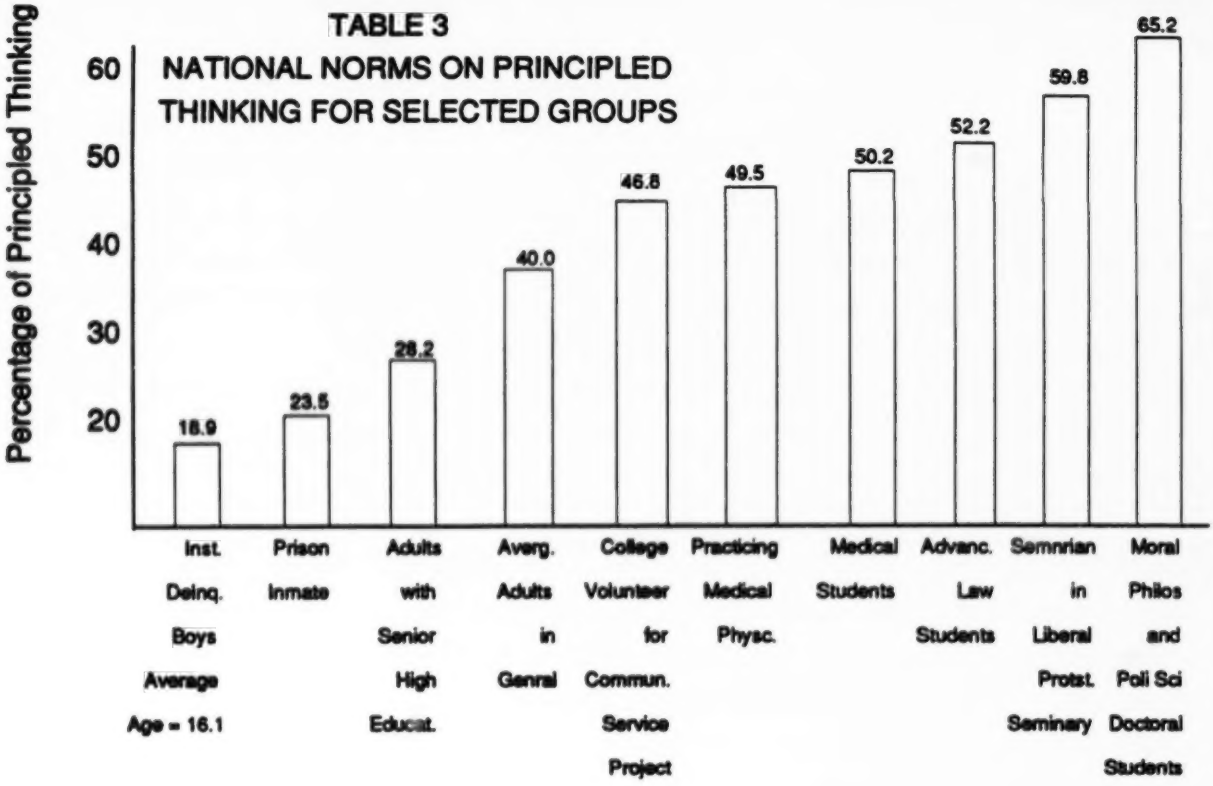
Rest and Deemer (1986) concluded that whether an individual continues in schooling "seems to determine his general course of development after high school."

Two tables adapted from research reports by Rest (1979b) further illustrate this linkage of education and increased levels of moral reasoning. Inspection of both Tables 2 and 3 reveals a direct relationship between years of formal education and increased scores on the DIT measure of principled thinking. On Table 2, for example, junior high school students had an average score of 21.9, high school students had an average score of 31.8, college students had an average score of 42.3, and graduate students had an average score of 53.3. In Table 3, this relationship of education and level of principled reasoning is further refined with the addition of categories within graduate study at the higher end of the spectrum, and at the lower end of the spectrum with such groups as institutionalized delinquents (18.9) and adults who did not continue their formal education beyond high school (28.2).

TABLE 2
COMPARISON OF SIERRA PROJECT
STUDENTS WITH NATIONAL NORMS
ON PRINCIPLED THINKING
Combined Student Groups



Adapted from Rest, 1979 Table 5.2



Adapted from Rest

The legacy of two decades of research on the moral reasoning component of character is the important finding that level of moral reasoning is directly linked to education. For educators, the discovery of this linkage is of profound importance. Schools and colleges can now assert with empirical support that educational experiences can raise the level of moral reasoning. For those who value character development as a significant aim of education, there is now evidence from two different approaches to measurement, of the effectiveness of education in achieving this aim.

The Growth of Character During the Freshman Year: The Sierra Project Results

The research design of The Sierra Project addressed the following question for the character measure of principled thinking:

Are there changes during the freshman year which are common to all of the groups sampled?

Analysis of variance is the statistical method utilized to distinguish differences among groups of scores when there is more than one factor involved (i.e., sex, class, group); it estimates the amount of variance attributable to each of these factors and their interaction, including a built-in error variance factor. The Repeated Measures Analysis of Variance (RMAV), as described by Jenrich and Sampson (1979), was performed in order to determine the effects of time (pre- versus post-testing), sex, cohort group, and treatment condition — as well as to identify any interactions among these factors. A RMAV further examines the differences in scores from multiple testings (e.g., pre-test and post-test). Statistical tests indicated that our data met requirements of the RMAV to appropriately apply and interpret its methods.

We chose the following basic categories to use in analysis:

Class: differences among the Classes of 1980, 1981, and 1982, i.e., cohort differences.

Sex: differences between scores for male and female subjects.

Change over time: changes occurring during the freshman year as assessed by the interval between pre-test and posttest.

Group: differences among the three populations of our project: Sierra (Experimental Group), Control Group I (Lago), and Control Group II (Random Control).

Notions such as Class x Sex or Change over time x Sex refer to the interaction between those categories.

The findings from administering the Defining Issues Test measure of principled thinking to freshmen in the Classes of 1980, 1981, and 1982 are reported in Table 4 which reveals that freshmen students as a group made a large and statistically significant gain ($p < .001$) in moral reasoning over the course of their first year of college study when the measure focused on their percentage of principled thinking. This gain was characteristic of all three classes studied. Sex of students did not influence the degree of change over the freshman year, even in the case of women in the Class of 1981, who entered the university scoring at a very high level. There were significant differences among the cohort groups in the percentage of their responses which were based on principled moral reasoning, men and women in the Class of 1981 both entering and leaving at a level higher than that of the other two classes ($p < .0003$).

TABLE 4

MEAN TEST SCORES AND REPEATED MEASURES ANALYSIS OF VARIANCE RESULTS FOR THE DEFINING ISSUES TEST MEASURE OF MORAL REASONING FOR FRESHMEN IN THE CLASSES OF 1980, 1981, AND 1982

		Mean Pre-test	Mean Post-test
CLASS OF 1980	**n[1]**	**Scores**	**Scores**
all males[2]	34	34.43	41.56
all females	35	30.97	38.82
Class of 1981			
all males	11	46.18	50.73
all females	34	45.29	45.21
Class of 1982			
all males	33	34.95	39.30
all females	40	41.83	43.21
ALL GROUPS Mean	187	38.12	42.20

Repeated Measures Analysis of Variance

	Degrees of Freedom	F Value	Significance
Class	2	8.39	.0003
Sex	1	.02	ns[3]
Class x Sex	2	2.66	.0728(ns)
Change overTime	1	15.88	.0001
Change over Time x Class	2	2.87	.0592(ns)
Change over Time x Sex	1	1.19	ns
Change over Time x Class x Sex	2	.59	ns

[1]n's are smaller than reported elsewhere because the repeated measures analysis of variance requires that complete data (all testing times) be available for all subjects used; hence, subjects on whom we have incomplete data are not used in this analysis.

[2]For this analysis, males and females from all groups are combined.

[3]ns= not significant at the .05 level of confidence.

The Growth in Character Which Occurred Over Four Years of Undergraduate Study: The Sierra Project Results

A similar pattern of change over four years of undergraduate study was found when freshmen were followed over all four years and retested at the end of their senior year. The longitudinal data on character which is available to address the question of changes in character development over four years of undergraduate study, consists of two measures on the Sierra Experimental Group only (moral maturity and ego development), and one measure (principled thinking) on the entire population (the Sierra Experimental Group and two control groups).

Change in moral maturity which occurred during the four years of undergraduate study with the Sierra Experimental Group (no control group).

Table 5 reports the mean test scores an the repeated measures analysis of variance results for the Moral Judgment Interview (measure of moral maturity) for the Sierra Hall Classes of 1980, 1981, and 1982 comparing their mean freshman year pre-test with their mean senior year post-test scores. Inspection of Table 5 reveals that there were no significant class (cohorts of 1980, 1981, and 1982) or gender differences.

There were statistically significant ($p<.001$) changes for Sierra participants as a group. The freshman pre-test sample had a combined mean of 283.79 and the senior post-test sample had a combined mean of 327.60. While this was a statistically significant finding, it is of only modest theoretical importance: A change of only 40 percent of a stage over four years of undergraduate study is not very large. Further, the sample as a whole was finishing the transition from Stage 2 to Stage 3 at the start of their freshman year. At the end of their senior year, they were still solidly rooted in the initial portion of Stage 3: basic conventionality.

Change in ego development which occurred during the four years of undergraduate study with the Sierra Experimental Group (no control groups).

The mean test scores on ego development from the Fall of the freshman year and the Spring of the senior year, along with a repeated measures analysis of variance for Sierra residents, combined for all three years, is reported in Table 6.

TABLE 5

MEAN TEST SCORES AND REPEATED MEASURES ANALYSIS OF VARIANCE RESULTS FOR THE MORAL JUDGEMENT INTERVIEW MEASURE OF MORAL REASONING FOR THE SIERRA HALL CLASSES OF 1980, 1981, AND 1982 COMPARING THEIR MEAN FRESHMAN PRE-TEST WITH THEIR MEAN SENIOR POST-TEST SCORES. (NO CONTROLS)

	n	Sierra Mean Freshman Pre-Test Scores	Sierra Mean Senior Post-Test Scores
Sierra Class of 1980			
males	12	313.25	347.67
females	11	264.91	315.00
Sierra Class of 1981			
males	11	244.09	348.45
females	17	285.24	307.82
Sierra Class of 1982			
males	10	292.30	337.50
females	14	296.71	320.86
All Sierra Males	33	282.85	344.85
All Sierra Females	42	283.74	314.05
Both Sex Combined	75	283.79	327.60

Repeated Measures Analysis of Variance

	Degrees of Freedom	F Value	Significance
Year	2	1.40	ns
Sex	1	3.32	.07(ns)
Group x Sex	2	2.20	ns
Change over Time	1	65.89	.00
Change over Time x Year	2	2.34	ns
Change over Time x Sex	1	6.35	.01
Change over Time x Year x Sex	2	6.27	.003

Inspection of Table 6 reveals that there were no significant class (cohorts of 1980, 1981, and 1982) or gender differences overall. There were some gender differences which reach statistical significance in some years.

There was a statistically significant change ($p<.002$) when the three cohorts were combined. The freshman pre-test sample had a combined mean of 4.62 (4.0 is the I-3 Conformist Stage and 5.0 is the I-3/4 transitional Conscientious/Conformist, Self-aware Stage). The senior year post-test score was a combined mean of 5.01 (I-3/4). While statistically significant, this was not a very important area of psychological growth over a four-year span. Based on this data, reflecting change in a relatively homogeneous sample of highly conventional college students who as freshmen had participated in a freshman year curriculum, the college years do not appear to be a time of fundamental progression in ego development.

TABLE 6

MEAN TEST SCORES AND REPEATED MEASURES ANALYSIS OF VARIANCE FOR THE WASHINGTON UNIVERSITY SENTENCE COMPLETION TEST FOR MEASURING EGO DEVELOPMENT FOR THE SIERRA CLASSES OF 1980, 1981, AND 1982 COMPARING THEIR MEAN FRESHMAN PRE-TEST SCORES WITH THEIR MEAN SENIOR POST-TEST SCORES. (NO CONTROLS)

	n	Sierra Mean Freshman Pre-Test Scores	Sierra Mean Senior Post-Test Scores
Sierra Class of 1980			
males	12	4.67	4.92
females	12	4.67	5.00
Sierra Class of 1981			
males	9	3.89	4.67
females	18	5.33	5.39
Sierra Class of 1982			
males	9	4.33	4.89
females	12	4.25	4.92
All Sierra Males	30	4.33	4.84
All Sierra Females	42	4.83	5.14
Both Groups	72	4.62	5.01

Repeated Measures Analysis of Variance

	Degrees of Freedom	F value	Significance
Year	2	.47	ns
Sex	1	3.13	.081(ns)
Year x Sex	2	3.09	.05
Change over Time	1	9.64	.002
Change over Time x Year	2	.42	ns
Change over Time x Sex	1	.39	ns
Change over Time x Year x Sex	2	.96	ns

Key to Loevinger Scores

1=I-2	3=Δ/3	5=I-3/4	7=I-4/5	9=I-5/6
2=Δ	4=I-3	6=I-4	8=I-5	10=I-6

Change in principled thinking which occurred during the four years of undergraduate study.

The mean test scores on principled thinking from the Fall of the freshman year and the Spring of the senior year, along with a repeated measure analysis of variance for Sierra residents and Control Group I, combined for all three years, is reported in Table 7.

Inspection of Table 7 reveals that there were no significant class (cohorts of 1980, 1981, 1982) or gender (sex) differences in the growth of principled thinking over four years of undergraduate study. However, there were statistically highly significant ($p<.00001$) changes for the entire sample (both sexes combined for all classes). The freshman pre-test sample had a combined mean of 36.94 in comparison with the senior post-test sample which had a combined mean of 48.14.

In addition to being a difference of major statistical significance, a change of twelve points on percentage of principled thinking is a finding of major theoretical and practical importance. It is a finding of theoretical importance because of the magnitude of the change during the college years. The college years have been determined to be a period of major growth in moral reasoning when moral reasoning is empirically defined as principled thinking. It is a finding of practical importance to college educators: They are working with a portion of the general population which is making major changes on a significant dimension of the human condition; namely, growth on dimensions of character.

TABLE 7

MEAN TEST SCORES AND REPEATED MEASURES ANALYSIS OF VARIANCE RESULTS FOR THE DEFINING ISSUES TEST MEASURE OF MORAL REASONING FOR SIERRA AND CONTROL GROUP I CLASSES OF 1980, 1981, AND 1982 COMPARING THEIR COMBINED FRESHMAN PRE-TEST SCORES WITH THEIR SENIOR POST-TEST SCORES

	n	Mean Freshman Pre-Test Scores	Mean Senior Post-Test Scores
CLASS OF 1980			
all males	16	34.59	42.09
all females	21	34.03	49.51
Class of 1981			
all males	10	34.40	51.70
all females	20	44.25	53.50
Class of 1982			
all males	14	34.52	42.34
all females	14	37.57	48.58
ALL GROUPS	95	36.94	48.14

(Continued on Next Page)

Table 7 (Continued)

Repeated Measures Analysis of Variance

	Degrees of Freedom	F Value	Significance
Class	2	1.68	ns
Sex	1	2.18	.097(ns)
Class x Sex	2	.07	ns
Change over Time	1	46.79	.0000
Change over Time x Class	2	.46	ns
Change over Time x Sex	1	.08	ns
Change over Time x Class x Sex	2	2.06	ns

Note: The collateral control group means (Control Group II) are as follows:

	n	Mean Freshman Pre-Test Scores	n	Mean Senior Post-Test Scores
Class of 1980				
males	20	32.90	11	44.81
females	13	44.39	15	42.45
Class of 1981				
males	11	38.09	8	36.66
females	15	48.13	8	47.91
Class of 1982				
males	13	48.08	4	42.50
females	13	41.33	10	51.33

Differential Effects of a Character Education Curriculum Over The Freshman Year: The Sierra Project Results

The research design of The Sierra Project allowed the assessment of the differential effects of the curriculum on the character dimension of principled thinking by the contrast of the differential change between the Sierra Experimental Group and the two control groups. It also allowed the reporting of the pre- and post-test scores for the Sierra Experimental Group on the character dimensions of moral maturity and ego development.

In analyzing group differences between pre-test scores and post-test scores, we chose to adjust for initial differences among the groups. We chose this statistical technique because our goal was to understand differences among the three groups in patterns of change evidenced over the course of the freshman year, not to assess their initial differences or the final result. If we simply examined the difference between pre-test and post-test scores, our analysis

would be affected by regression towards the mean. If we examined only the post-test scores of the three groups, our analysis would not be responsive to initial differences among the groups.

In order to examine differences in change from pre- to post-testing related to treatment condition, we employed the analysis of covariance, using the pre- to post-test gain score as the dependent variable and the pre-test score as the co-variate (Hendrix, Carter, and Hintze, 1973, p. 101). This method of analysis allows us to examine differences in degree of change among the three treatment groups while controlling for initial differences among groups. We need this technique to compare three groups at two test administrations so as to distinguish the variance accounted for by variations in treatment.

Principled Thinking. With respect to group differences in moral reasoning (as reflected by percentage of principled thinking), Table 8 reveals that Sierra residents in the Class of 1980 experienced a major increase in moral reasoning (a mean adjusted gain score of 11.9224). This is in contrast to increases of 3.0458 for Control Group I (Lago) and 4.9085 for Control Group II (Random Control). When the analysis of covariance was performed, the differences among adjusted gain scores approached significance ($p<.0596$). For the Class of 1981, the differences among the three groups on moral reasoning were more pronounced, reaching statistical significance ($p<.0009$) largely because Control Group II scores declined sharply, with a loss of 6.4511. In the case of the Class of 1982, scores for all three groups increased, with no significant differences among them.

TABLE 8

ANALYSIS OF COVARIANCE USING ADJUSTED GAIN SCORES FOR EACH YEAR ON MORAL REASONING FOR FRESHMEN IN THE CLASSES OF 1980, 1981, AND 1982 COMPARING SIERRA, CONTROL GROUP I, AND CONTROL GROUP II

Moral Reasoning (DIT)	Experimental Group (Sierra)	Control Group I (Lago)	Control Group II	F Value	Significance
Class of 1980	11.9224	3.0458	4.9085	2.9456	ns(.0596)
Class of 1981	2.8989	6.8531	-6.4511	8.3459	.0009
Class of 1982	2.9597	1.8065	3.7244	.1852	ns

Since the analysis of covariance for the adjusted gain scores showed a significant difference for the Class of 1981 ($p<.0009$), it was permissible to employ a post hoc analysis to identify the location of that difference. The results of this analysis are presented in Table 9.

The post hoc analysis revealed that both Sierra and Control Group I scores differed from those of Control Group II for the Class of 1981 ($p<.01$ for each). Control Group II declined in percentage of principled thinking, registering an adjusted gain score of -6.4511, while Sierra and Control Group I (Lago) increased, registering adjusted gain scores of +2.8989 for Sierra and +6.8531 for Control Group I.

TABLE 9

DIFFERENCES IN MORAL REASONING USING COVARIANCE ANALYSIS OF ADJUSTED GAIN SCORES, AND PLANNED CONTRAST AND POST HOC ANALYSIS FOR THE DEFINING ISSUES TEST MEASURE OF MORAL REASONING FOR FRESHMEN IN THE CLASSES OF 1980, 1981, AND 1982 COMPARING SIERRA, LAGO (CONTROL GROUP 1) AND CONTROL GROUP II

Adjusted gain scores:

Class	Sierra	Lago	Control Group II	F value	Significance
1980	11.9224	3.0458	4.9085	2.9456	ns(.0596)
1981[1]	2.8989	6.8531	-6.4511	8.3459	.0009*
1982	2.9597	1.8065	3.7244	.1852	ns

Planned Contrasts: "t" test

Class	Contrast	"t" value	"t" probability
1980	Sierra vs. Lago & Control II	2.3634	.0211
	Lago vs. Control II	.4129	ns
1981	Sierra vs. Lago & Control II	1.0399	ns
	Lago vs. Control II	3.8984	.0004
1982	Sierra vs Lago & Control II	.0805	ns
	Lago vs. Control II	.5669	ns

***Post Hoc Analysis (For Class of 1981):**

Contrasted Groups	Degrees of Freedom	F Value	Significance
Sierra vs. Lago	59	1.0329	ns
Sierra vs. Control II	59	6.4657	.01
Lago vs. Control II	59	12.7259	.01

[1]The Class of 1981 met the requirements for post hoc analysis; no other group met the requirements.

Another way to explore the differential changes in principled thinking among Sierra and the control groups is to compare the amount of growth in moral reasoning for all years combined. This analysis is presented in Table 10.

A review of Table I0 reveals that there were differences in the amount of change among the groups. Combining all Sierra classes, we find an adjusted gain score of change of +6.2662 in percent of principled thinking. The corresponding increases in principled thinking were +3.I606 for Control Group I and +I.2887 for Control Group II. This difference was statistically significant (p<.05). The planned comparison of the Sierra group to the combined control groups revealed that the group which received the experimental treatment (Sierra) was found to differ significantly from the aggregated control treatments (p<.0I88).

TABLE 10

ADJUSTED GAIN SCORE ANALYSIS OF COVARIANCE OF PERCENT OF PRINCIPLED THINKING FROM THE DEFINING ISSUES TEST COMPARING ALL SIERRA CLASSES OF 1980, 1981, AND 1982 WITH ALL CONTROL GROUP I (LAGO) SUBJECTS FROM THE CLASSES OF 1980, 1981, AND 1982 WITH ALL CONTROL GROUP II (RANDOM CONTROL) SUBJECTS FROM THE CLASSES OF 1980, 1981, AND 1982 FOLLOWED BY PLANNED COMPARISON "T" TEST CONTRASTS OF SIERRA (EXPERIMENTAL GROUP) VERSUS ALL CONTROL GROUPS (CONTROL GROUP I AND CONTROL GROUP II) AND CONTROL GROUP I VERSUS CONTROL GROUP II

Adjusted gain score analysis of covariance

	Sierra (all classes combined)	Control Group I (all classes combined)	Control Group II (all classes combined)
Principled thinking adjusted gain score	+6.2662 n=83	+3.1606 n=58	+1.2887 n=46

F value - 3.0060

Degrees of freedom = 2

p<.05

Planned comparison contrast "t" test

Sierra versus all Control Groups

"t"=2.3720 p =<.0188

Control Group I (Lago) versus Control Group II (Random Control)

"t"=.8236 p = ns

In terms of our overall evaluation of the psychological intervention provided through The Sierra Project, this is an extremely important finding. Principled thinking was the only measure of character (the others being moral maturity and ego development) which we were able to

collect on the entire sample: the two control groups as well as the Sierra group. On this measure, Sierra residents exhibited greater change toward a higher level of moral reasoning than students in both control groups. The differences were moderate in size, one class (the Class of 1980) accounting for a large proportion of the positive change in Sierra scores. The conclusion we draw, however, is that the Sierra curriculum can make a moderate contribution toward furthering character development in college freshmen during a year in their lives which would normally include a small but persistent gain in level of moral reasoning.

Ego Development: Except with the Class of 1981, it was not possible for us to measure the ego development of the control groups. Table 11 provides the analysis of the data collected on the Class of 1981, comparing Sierra and Control Group II.

Examining Table 11 we see that the initial level of ego development was significantly lower in the Sierra group than in Control Group II for the Class of 1981 ($p<.05$). However, the Sierra group had greater growth between fall and spring testing ($p<.0019$). Sex and the interaction of sex and group were also found to exert effects on student change ($p<.0141$ and $p<.0026$ respectively). Sierra men from the Class of 1981 increased in ego level (from I-3 to I-3/4) while Sierra women and students of both sexes in Control Group II declined slightly.

TABLE 11

MEAN TEST SCORES AND REPEATED MEASURES ANALYSIS OF VARIANCE FOR THE WASHINGTON UNIVERSITY SENTENCE COMPLETION TEST FOR MEASURING EGO DEVELOPMENT FOR THE CLASS OF 1981 COMPARING SIERRA AND CONTROL GROUP II

	n[1]	Mean pre-test Score	Mean Post-test Score
Class of 1981			
Sierra Males	16	4.19[2]	5.13
Control Males	13	5.31	5.00
Sierra Females	18	5.06	4.89
Control Females	16	5.38	5.19

(Continued on Next Page)

Table 11 (Continued)

Repeated Measures Analysis of Variance

	Degrees of Freedom	F value	Significance
Group	1	4.23	.0442
Sex	1	1.28	ns [3]
Group x Sex	1	.23	ns
Change over Time	1	.50	ns
Change over Time x Group	1	10.60	.0019
Change over Time x Sex	1	6.40	.0141
Change over Time x Group x Sex	1	9.92	.0026

[1]n's are smaller than reported elsewhere because the repeated-measures analysis of variance requires that complete data (all testing times) be available for all subjects used; hence, subjects on whom we have incomplete data are not used in this analysis.

[2]Key to numbers: 1 = I-2 2 = Δ 3 = Δ 3 4 = I-3 5 = I-3/4
6 = I-4 7 = I-4/5 8 = I-5 9 = I-5/6 10 = I-6

[3]ns = not significant at the .05 level of confidence

Central Implications of The Sierra Project for The Freshman Year and Undergraduate Education

The freshman year has been found to be a period of moderate growth in the level of the principled thinking dimension of character. This growth occurred in freshmen who had a high expectation for the sense of community which they would experience at college. Uniformly, this high level of expectation was met with a lessened perceived reality of community. The reasons they stated for this situation were clear and unambiguous:

- The intense competition from peers;
- The psychological distance from faculty and staff; and,
- The perceived low level of community which existed on the UCI campus.

Residents of Sierra Hall reported <u>less</u> of a gap between what they expected and what they actually received. Given the emphasis the Sierra staff placed on developing a high level of community, the gap students reported between the myth of community in higher education and the perceived reality of lack of community is noteworthy.

Of the three sources of disappointment students reported on the community issue, one was especially specific to Irvine at the time of intervention. There was no University Center (Student Union), the average commuter student traveled eleven miles each way to the university, and only thirty percent of the student body was housed on campus. Students with similar interests and enthusiasms had a hard time getting together. (This situation has been improved subsequently with the opening of the University Center with its many and diverse gathering places, activities and programs.) The other two sources of disappointment, however, are not at all specific to the Irvine campus of the University of California: intense competition from peers, and psychological distance from faculty and staff.

The residents of Sierra Hall reported they had experienced a higher level of community than did their peers in other living arrangements without the curriculum. For theoretical reasons previously reviewed in Whiteley and Associates (1982), the creation of a sense of community was viewed as a vital contributor to raising the level of moral reasoning. The basic notion is that it is possible to challenge students much more intensely when that challenge occurs within the context of an environment which is personally supportive and which is characterized by a psychological sense of community. The lineage of such a notion is Nevitt Sanford's pioneering work on student development in higher education (Sanford, 1956; 1962).

The Sierra research design did not permit differential attribution of effects by components of the curriculum. Our impressions, however, substantiated by student retrospective reports, are that the psychological sense of community was an important contributor to the most significant empirical finding to emerge from the freshman year curriculum intervention; namely, that the Sierra experimental group which experienced the curriculum increased on principled thinking twice as much as did the two control groups. This moderate differential change attributable to the curriculum occurred in the context of freshmen as a group making small but persistent positive change in their scores on the principled thinking measure of moral reasoning.

Finally, as reported in the student retrospective (Bertin, Ferrant, Whiteley, and Yokota, 1985), the freshman year <u>itself</u> turned out to be a positive catalyst for change. The psychological distance from previous support groups including parents and high school chums, the opportunity for making important decisions, the consequences of increased personal autonomy from all authority, and the immersion in a new multicultural, coed educational culture all combined to create a catalyst for personal change in the crucible of the freshman year.

<u>Undergraduate Education</u>. The college years have been found to be a period of significant growth in the principled thinking dimension of character development. This growth

was found to be both statistically significant and psychologically important: Twelve points of change on principled thinking from 36 percent to 48 percent is major by any yardstick.

There is perhaps no period in young people's lives when they are more open to new experiences and alternative ways of thinking about those experiences. In retrospective interviews, in detailed case studies, and in the context of regular interviewing throughout an academic year, students were nearly unanimous in reporting that they would not be who they had become if it were not for the college experience, especially on dimensions of thinking about moral issues. They did make one important qualifier: They had not changed as much as they had developed.

As we struggled to understand their meaning in using development in contrast to change, it seemed to us that they were expressing that the core of who they were had remained the same. It was their appreciation of the world of moral choices and their stance in relation to those choices which had become more acute and sensitive, and this was appropriately considered by them to be development.

Irrespective of the meaning attributed to their characterization of the subjective experience of change during four years of college, and the context in which they understand that change to have occurred, the empirical measures confirm the magnitude of what occurred, at least on the principled thinking dimension of character.

It proved possible in The Sierra Project to stimulate the personal psychological development of college students within a framework of rigorous academic accomplishment. The elective course structure of a publicly assisted research university allowed Sierra students to earn four units of graduation credit (in contrast to departmental credit toward an academic major) each of the three quarters of their freshman year.

The four year graduation rate for Sierra Hall students was sixty percent in contrast to the campus average of forty-four percent. This we attribute to two factors: the sense of community, and the closeness of relationships with significant faculty and staff during the freshman year. The sense of community contributed to a level of support which we view as highly significant. Students made enduring friendships during the first year which were nurtured in an environment of shared experiences and trust.

The chief effect which close relationships formed with faculty and staff in the freshman year had on retention was that students could and did make "connections" with the support structures of the university: the formal and informal academic advising structure, personalized

advice on how to make the "system" work, and personal introductions to counseling, career planning, health, and faculty personnel. While such introductions and advice may be an integral part of life on a liberal arts college campus, it is not in a research multiversity.

Implications for Higher Education of Rethinking the Context for Promoting Personal Development in The Freshman Year

The concluding section of this chapter on the potential for promoting the development of character during the freshman year will center on three different perspectives. The first perspective is provided by summarizing what is possible to accomplish with college freshmen that could not be done three decades ago as a consequence of accumulated theoretical advances, instrument development, and empirical research.

Three decades ago, reflecting the general status of psychological and educational theory and measurement, promising constructs for understanding the course of college student development had not yet become embedded in general theory, and the development of instrumentation relevant to the transition from late adolescence to early adulthood was in its infancy.

At this point in time, however, it is now possible to accomplish a number of tasks central to promoting value and ethical development which have heretofore not been within the capacity of teachers and researchers. The power of the impact of the educational experience on college students can be enhanced by:

1. Assessing accurately the psychological and educational status of students on a host of significant developmental dimensions;

2. Charting change in students over time using the initial assessment as a base;

3. Identifying developmentally relevant curricula which will produce desired change;

4. Sequencing educational experiences within that curricula in such a manner as to optimize their impact; and

5. Determining the portion of student development which is attributable to maturation and that which is attributable differentially to the effects of the curricula.

The second perspective is provided by recounting a perhaps apocryphal story told by Nevitt Sanford about the encounter between the parent of a Brown University student and a college dean:

> There is a story about the mother whose son went to Brown University. In reading the catalogue, she found it said that they were going to teach him how to think for himself, be sensitive to the needs of other people, etc., etc. And the mother, a little bit skeptical, said to the Dean, "Are you really going to do all these things?" And he said, "Ma'am, we guarantee results, else we'll return the boy!" (Whiteley, 1984).

Perhaps those with fiduciary responsibility for higher education cannot fully endorse the guarantee to produce results or return the child, but we have entered a new era of the possible, and that new era is extraordinarily hopeful.

The third perspective is gained from a consideration of the central implications of The Sierra Project, which centered on the freshman year experience, for higher education. The central implications for higher education, beyond those covered in the perspectives on the freshman year and undergraduate education, are four: level of student interest, hospitality of the campus, generalizability of the curriculum, and the overall impact of higher education on character development.

First, students chose to participate in all levels of The Sierra Project with a willingness and enthusiasm far beyond our expectations. Whether it was the willingness of the control groups to subject themselves to recurrent testing, the sophomore staff to dedicate a vast amount of time to the success of the project, or the freshmen to pass along to prospective students that the Sierra experience was well worth a year of their involvement, the professional staff each year had a host of vitally interested freshmen students and student staff colleagues.

Second, the university itself proved to be far more hospitable to The Sierra Project intervention than we had imagined. The faculty communities responsible for granting instructional improvement funds, approving academic courses, and authorizing research on human subjects acted positively in support of our endeavors. The Chancellor of UCI at the time of the intervention, Daniel G. Aldrich, Jr., made a number of public statements about the significance of a university engaging in character education. Finally, the staff of the Housing Office involved themselves in the program, assisted with myriad details involved in administering a living-learning program and continued the program intact after the initial primary classroom instructor (Janet Clark Loxley) and principal research investigator (John M. Whiteley) had gone on to other tasks.

Third, the Sierra curriculum as it was implemented and reported (Loxley and Whiteley, 1986) provides a week-to-week roadmap of what we did, problems we encountered, and feedback we received. It is a curriculum, however, tied in important respects to the freshman year of students in a research university who were highly conventional in terms of the theories of moral reasonings and ego development. Therefore, while the general presentation of character issues and the sequencing of educational experiences constitute a model we have found valid for our population, the actual presentation of classes needs to be adapted by subsequent researchers and teachers to the developmental level of student participants and to the particular characteristics of the educational institution in which the character intervention takes place.

In adapting the curriculum to the requirements of different colleges and universities, it may be useful to keep in mind that in our assessment the key components of The Sierra Project curriculum are as follows:

1. The psychological sense of community;

2. The presence of more mature role models in the residence halls;

3. The assertion training model which developed students' skills in identifying the rights of oneself and others and learning to resolve conflicts fairly;

4. The empathy training module which increased students' perceptions of how other people experience situations;

5. The greater responsibility for their educational experiences which was demanded of students;

6. The structured exercises which required students to rethink a number of previously unexamined beliefs; and

7. The consideration of sex roles and race roles which stimulated more complex thinking about ways of relating to other people.

In our assessment, the provision of both moral and psychological educational experiences is essential.

Fourth, and most significantly, The Sierra Project demonstrated once again that education can make a difference in promoting what John Dewey called the development of a "free and powerful character." Consistent with an emerging number of research studies on different populations in diverse settings, the effect of formal education as a catalyst to significant moral growth was again demonstrated, this time in the context of the freshman year at college, and subsequently affirmed over four years of undergraduate study.

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